Expansion Voids

All MFMA manufacturers have detailed specifications which call for installation of expansion voids at the floor perimeter and at all vertical obstructions on certain types of their flooring systems.

Expansion voids are areas in a maple sports flooring system that provide unobstructed space for system movement. Expansion voids play a critical role in the integrity, performance, and longevity of a floor.

The Expansion voids must be free of all debris, subfloor material and flooring for proper floor performance. Expansion voids are usually found at the perimeter of a floor and at all vertical obstructions including: volleyball inserts, floor electrical outlets, audio/video box hookups, threshold anchors, and bleacher anchors within the borders of the floor.

Maple sports flooring systems are generally categorized into several system types or configurations. "Fixed" flooring systems are typically specified in locations where system movement is not anticipated or desired. Floating and (some)* Fixed Resilient floor systems are typically specified in installations where system movement is anticipated. The installation of expansion voids at the system perimeter and at all vertical obstructions is required in most "floating" or fixed resilient floor system specifications.

As a general rule, the MFMA recommends that no fixtures, equipment, or bleachers be anchored directly to the floor system. When anchoring through floating or fixed resilient maple sports floor systems into the concrete, the maple and subfloor components must be removed to allow the specified expansion void at the fasteners' perimeter for system movement. Through anchoring fasteners must not "pin the floor system" mitigating the natural expansion and contraction for the floor system.

"Fixed" systems such as the generic Nail-in-Channel and Channel and Clip floors are designed to hold the flooring tightly in place, restraining the system from movement. Installation of expansion voids at the perimeter and at vertical obstructions is not usually required with these system configurations.

Consistent effort must be given to keep all expansion voids clean and free of debris. Regular attention and inspection of perimeter voids and floor insert locations will ensure flooring system movement as the system was designed. Buckling, warping and rolling of flooring components can occur when expansion voids are clogged with debris and may impede the system from the free movement it was designed to accommodate.

MFMA and all its member manufacturers have published specifications that prescribe optimum temperature and humidity ranges to ensure satisfactory performance and reduce the likelihood that any bind-up of components will ever occur on a maple floor installed with proper provision for system movement.

MFMA recommends maintaining indoor temperatures between 55 and 75 degrees and indoor relative humidity between 35 percent and 50 percent year-round. If the flooring materials are properly acclimated, a 15 percent fluctuation in indoor relative humidity will not adversely affect the maple. Excessive shrinkage and/or expansion may occur with indoor relative humidity variations that exceed 15 percent, and variations of this magnitude may create difficulties with vertical obstructions in some "floating" and fixed resilient flooring systems.

If you have additional questions, please contact MFMA's Technical Director at 888/480-9138.

Revised 12/16

Maple Flooring Manufacturers Association
Toll Free: 888/480-9138
E-mail: mfma@maplefloor.org www.maplefloor.org